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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,310	12/06/2001	Kenichi Nakagawa	1015U-490	4813
466	7590	11/05/2003	EXAMINER	
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			NGUYEN, THONG Q	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/003,310

Applicant(s)

NAKAGAWA ET AL.

Examiner

Thong Q. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 9-20 and 25-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 21-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species (I) in Paper No. 6 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

It is noted that in the Election, applicant has stated that claims 1-8 and 21-24 are readable from the elected species (I). After review the pending claims, the examiner has agreed with the applicant's selection of elected claims 1-8 and 21-24.

As a result of applicant's election, claims 1-8 and 21-24 are examined in this Office action, and claims 9-20 and 25-36 have been withdrawn from further consideration as being directed to non-elected species.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

3. The drawings contain seven sheets of figures 1-10 were received on 12/06/2001. These drawings are objected by the examiner for the following reasons.

4. Figures 1-5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See present specification in pages 1-4. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply

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to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: The numerical reference "143" as shown in figure 5 is not mentioned in the specification. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: The numerical reference "144" stated in page 4 and the reference "6A" stated in pag2 12 are not shown in at least one figure. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

7. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

8. The incorporation of essential material in the specification by reference to a foreign application or patent, or to a publication is improper. Applicant is required to

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amend the disclosure to include the material incorporated by reference. The amendment must be accompanied by an affidavit or declaration executed by the applicant, or a practitioner representing the applicant, stating that the amendatory material consists of the same material incorporated by reference in the referencing application. See *In re Hawkins*, 486 F.2d 569, 179 USPQ 157 (CCPA 1973); *In re Hawkins*, 486 F.2d 579, 179 USPQ 163 (CCPA 1973); and *In re Hawkins*, 486 F.2d 577, 179 USPQ 167 (CCPA 1973).

Claim Rejections - 35 USC § 112

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claims 4-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

a) Claim 4 is rejected under 35 USC 112, first paragraph because the specification does not disclose that the transparent layer (12) comprises a color material which contains a reducing material as recited.

b) The remaining claim is dependent upon the rejected base claim and thus inherits the deficiency thereof.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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12. Claims 1-8 and 21-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Claim 1 is indefinite because it is unclear about the structure of the light absorbing layer as recited in the feature thereof "said light absorbing... specified conditions" (last three lines of the claims). In particular, it is unclear about the so-called "specified conditions" so that the color material can convert into fine metal particles.

b) Claim 4 is indefinite because the feature "said coloring material for said transparent layer" (lines 1-2) lacks a proper antecedent basis.

c) Claim 21 is rejected under 35 USC 112, second paragraph for the similar reason as set forth in element a) above.

d) The remaining claims are dependent upon the rejected base claims and thus inherit the deficiencies thereof.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1-2, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as described in pages 2-3 and shown in figure 3 of the present application in view of Staehle et al (U.S. Patent No. 2,378,252).

The prior art as described in pages 2-3 and shown in figure 3 of the present application discloses an optical diffusing film (6) having a transparent layer (12), a layer of transparent microspheres (14) formed on one surface of the transparent layer (12), a layer of light absorbing material (20) formed over the transparent layer in a manner that leaves the transparent microspheres partly bare, and a transparent substrate (10) formed on the other surface of the transparent layer (12) opposite to the layer of microspheres. The only feature missing from the prior art is that it does not explicitly state that the layer of light absorbing material is made by color material convertible to fine metal particles under the so-called "specified conditions".

The use of a light control film having a transparent layer supporting a layer of spheres on one surface thereof and a layer of light absorbing material formed over the transparent layer in a manner that leaves the transparent microspheres partly bare wherein the material is a color material convertible to fine metal particles under specified conditions is clearly disclosed in the art as can be seen in the diffusing film provided by Staehle et al. See column 3 and fig. 4, for example. It is also noted that the present claim 1 does not provide any limitations relating to the so-called "specified conditions" so the formation of the light absorbing layer which is made by a layer of thermoplastic material or gelatin containing dark or blue dyes as provided by Staehle et al is considered as a product produced/manufactured under a numbers of specified conditions.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the diffusing film provided by the prior art by using a light absorbing layer made by color material convertible to fine particles as suggested by Staehle et al for the purpose of increasing the ability of absorbing light and maintaining the shape of the microspheres/particles.

15. Claims 21-24, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as described in page 3 and shown in figure 4 of the present application in view of Staehle et al (U.S. Patent No. 2,378,252).

The prior art as described in page 3 and shown in figure 4 of the present application discloses a method for making an optical diffusing film (6) having a transparent layer (12), a layer of transparent microspheres (14) formed on one surface of the transparent layer (12), a layer of light absorbing material (20) formed over the transparent layer in a manner that leaves the transparent microspheres partly bare, and a transparent substrate (10) formed on the other surface of the transparent layer (12) opposite to the layer of microspheres. The steps (I-V) as described in the mentioned page meets all of the steps recited in the present claims except the feature relating to the structure of the light absorbing layer. In other words, the prior art does not explicitly state that the layer of light absorbing material is made by color material convertible to fine metal particles under the so-called "specified conditions".

The use of a light control film having a transparent layer supporting a layer of spheres on one surface thereof and a layer of light absorbing material formed

over the transparent layer in a manner that leaves the transparent microspheres partly bare wherein the material is a color material convertible to fine metal particles under specified conditions is clearly disclosed in the art as can be seen in the diffusing film provided by Staehle et al. See column 3 and fig. 4, for example. It is also noted that the present claim 1 does not provide any limitations relating to the so-called "specified conditions" so the formation of the light absorbing layer which is made by a layer of thermoplastic material or gelatin containing dark or blue dyes as provided by Staehle et al is considered as a product produced/manufactured under a numbers of specified conditions.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the diffusing film provided by the prior art by using a light absorbing layer made by color material convertible to fine particles as suggested by Staehle et al for the purpose of increasing the ability of absorbing light and maintaining the shape of the microspheres/particles.

Regarding to the step of treating the solution layer of the color material as recited in the present claim 21 and the use of rubber for the heat conductive flexible sheet as recited in claim 24, such features are inherent or alternatively obvious to one skilled in the art in a process of manufacture the film. The reason for that conclusion is that any product needs a step of treatment for the purpose of stabilizing the formation and the structure. Further, the use of a rubber sheet for transferring heat flow will control the flow of heat and simultaneously prevent the damage to the microspheres/beads under the pressing force of the sheet.

16. Claims 6-8, as best as understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as described in pages 2-3 and shown in figure 3 of the present application in view of Staehle et al as applied to claim 1 above, and further in view of Altman (U.S. Patent No. 3,614,199).

The combined product as provided by the prior art and Staehle et al as described above does not explicitly state the dimension of the microspheres; however, the use of microspheres with dimension in the range of 1 to 50 microns is known to one skilled in the art as can be seen in the diffusing film provided by Altman. In particular, Altman discloses a diffusing film having a transparent layer, a layer of spheres formed on one surface of the transparent layer and a layer of light absorbing material formed on the mentioned surface of the transparent layer for holding the spheres and for absorbing unnecessary light wherein the spheres has a dimension in the range of 1 to 50 microns. See Altman, columns 2-3. Thus, it would have been obvious to one skilled in the art at the time the invention was made to utilize a layer of microspheres wherein the microspheres has a dimension in the range of 1 to 50 microns as suggested by Altman in the combined product provided by the prior art and Staehle et al for the purpose of increasing the light transmission/diffusion.

Allowable Subject Matter

17. Claim 3/2/1 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

18. The following is an examiner's statement of reasons for allowance:

The diffusing film as recited in claim 3/2/1 is patentable with respect to the cited art by the limitation relating to the type of material used for the light absorbing layer. In particular, while a diffusing film having a transparent layer, a diffusing layer having microspheres formed on one surface of the transparent layer, a light absorbing layer formed on the mentioned surface for holding the microspheres and for absorbing unnecessary light, and a transparent base layer formed on other surface of the transparent layer is known in the art; however, the art does not disclose that the light absorbing layer comprises color material made by silver behenite as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

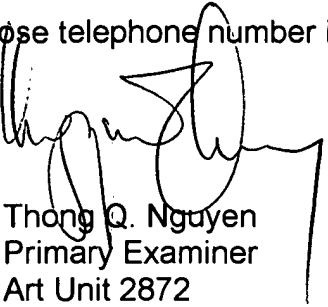
Conclusion

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thong Q. Nguyen whose telephone number is (703) 308-4814. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A Dunn can be reached on (703) 305-0024. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.



Thong Q. Nguyen
Primary Examiner
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